



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,077	09/16/2003	Masanori Ishikawa	1232-5151	6115
27123	7590	07/31/2007	EXAMINER	
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101				LIN, ANDY C
ART UNIT		PAPER NUMBER		
2609				
MAIL DATE		DELIVERY MODE		
07/31/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/665,077	Applicant(s) ISHIKAWA ET AL.
	Examiner Andy C. Lin	Art Unit 2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on _____.
2a) This action is **FINAL**. 2b) This action is non-final.
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-16 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 16 September 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) Notice of Informal Patent Application _____
6) Other: _____

DETAILED ACTION

Abstract

1. Applicant is reminded of the proper language and format for an abstract of the disclosure:

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because of the applicant's usage of the word "comprises" on line 3. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-3, 8, 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,193,651 B2 to Kato in view of Patent No. 3,987,470 to Nesson et al.**

As for **claim 1** Kato discloses a camera on which a lens apparatus is mountable, the lens apparatus comprising an image-taking optical system which includes a focus lens (Column 2, Lines 15-22) and a [communication circuit for performing information communication between the camera and the lens apparatus, a focus detection unit for detecting a focus adjustment state of the image taking optical system] (Column 3, Lines 18-24), a controller in the form of a [lens side CPU for performing communication of various information between itself and a camera side CPU in the camera] which in essence are two controllers sending data and signals through the communication circuit on both ends and it also states that it is also used for [governing driving of the focus motor in the interchangeable lens and control of respective portions such as a light amount adjuster (stop)] (Column 5, Lines 51-56) and it further states that [information detected by the focus detection unit and the information about the photosensitive

member stored in the photosensitive member information storage circuit are transmitted to the lens apparatus through the communication circuit] (Column 3, Lines 25-29).

What is not disclosed by *Kato* is the technique of focusing when the stop also known as a diaphragm is at one state and then stopping down the stop and then focusing a second time. This technique however is disclosed by *Nesson et al.* which states [a camera having an adjustable focusing means, an iris diaphragm including at least one element which is movable to define a variable lens aperture, first means for selectively interconnecting said focusing means and said diaphragm element and providing a drive connection therebetween when so interconnected for adjustment movement of said movable iris diaphragm element as said focusing means is adjusted to vary such aperture in direct and continuous response to the adjustment movement of said focusing means, and second means cooperating with said first means and said diaphragm for selecting between first and second modes of operation, said second means being operative with said first means and said diaphragm for moving said diaphragm element to a fully open aperture position in said first mode of operation and overriding said drive connection in said first mode and thereby precluding such adjustment movement of said diaphragm element as said focusing means is adjusted and maintaining said fully open aperture position in said first mode, and said second means permitting such adjustment movement of said diaphragm element by said first means as said focusing means is adjusted in said second mode of operation] (Claim 1; Column 9, Line 52 – Column 10 Line 7).

Kato and Nesson et al. are analogous art because they are from the same field of endeavor with respect to cameras. It would have been obvious to a person of ordinary skill in the art to use the technique taught in *Nesson et al.* for *Kato*'s invention in order to have better exposure control by providing appropriate adjustments as stated in *Nesson et al.* (Column 1, Lines 23-26). A person of ordinary skill in the art knows that at a fully open aperture position one would have more light exposure that allows for better adjustments that can't be done at a stopped down state that allows less light to pass through, but at a stopped down position the focus would be off and needs to be accounted for by refocusing, a person of ordinary skill in the art knows of this problem and knows to fix something out of focus one can refocus. The technique is disclosed by *Nesson et al.* and the motivation to apply that technique could be as simple as for better light exposure control.

As for **claim 2** refer to rejection of claim 1 where the first state is already stated to be a full aperture state and the second state is a state in which the stop is stopped down for image taking which was disclosed by *Nesson et al.* (Claim 1; Column 9, Line 52 – Column 10 Line 7). The same motivation is used as the rejection for claim 1.

As for **claim 3** *Kato* discloses his/her invention has [an image pickup device such as a CCD and CMOS which records optical images *that* is converted into electrical signal] (Column 3, Lines 30-33). It then goes on to say that the image signal from the image pickup device is evaluated for detecting in-focus state by the focus detection unit (Column 3, Lines 51-54), which shows that the image pickup device is used for detecting focus and is part of the focus detection unit and is used for sensing optical

images that as stated in the rejection to claim 1 is formed by an image-taking optical system.

As for **claim 8** see similar rejection to claim 1.

As for **claim 10** refer to rejection of claim 1. The only difference here is that the controller is not sending data that drives the focusing but rather is driving the focusing. *Kato* discloses a different embodiment similar in other aspects to the one used in the rejection of claim 1 except in this embodiment there is a [control circuit for controlling the lens driving unit] where it [uses the information about the set driving pattern to control the lens driving unit based on information detected by the focus detection unit] (Column 2, Lines 33-53).

As for **claim 11** refer to rejection of claim 10 where the first state is already stated to be a full aperture state and the second state is a state in which the stop is stopped down for image taking which was disclosed by *Nesson et al.* (Claim 1; Column 9, Line 52 – Column 10 Line 7). The same motivation is used as the rejection for claim 1.

As for **claim 12** see similar rejection to claim 3.

5. **Claims 4-7, 9, 13-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,193,651 B2 to *Kato* in view of Patent No. 3,987,470 to *Nesson et al.* and in further view of Publication No. 2003/0020825 A1 to *Higuma et al.*

As for **claim 4** refer to rejection to claim 1. Everything is the same, the only difference is there is now two separate focus detection units based on different

detection systems, and that one focus detection unit is used for the first state and the second focus detection unit is used for the second state after stopping down the stop. This feature is an obvious improvement to claim 1 for one of ordinary skill in the art by looking at what is disclosed in *Higuma et al.* *Higuma et al.* discloses a [so-called hybrid scheme AF] [in which the phase difference detection scheme is first used to perform focusing operation of a focus adjusting lens at low resolution and then the contrast detection scheme is used to perform fine adjustment of the focusing operation] (Paragraph 0027). It later goes to elaborate an embodiment where it is specified that these two focus detection methods are used in two separate focus detection units and that focusing is performed after the first focus detection unit detects the focus state and also after the second focus detection unit detects the focus state (Paragraph 0065). And also that the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] (Paragraph 0061). This shows a camera using two different focus detection systems and it is obvious to one of ordinary skill in the art to use the two different focus detection units for the two different states in the invention being claimed.

Kato, Nesson et al., and *Higuma et al.* are analogous art because they are from the same field of endeavor with respect to cameras. It would have been obvious to a person of ordinary skill in the art to implement the discussed improvement to claim 1

with the motivation to reduce focusing time caused by just using the contrast scheme and to eliminate the problem of not having a high enough resolution that is required by just having a phase scheme as told by *Higuma et al.* (Paragraph 0024-0026).

As for **claim 5** refer to rejection of claim 4 where the first state is already stated to be a full aperture state and the second state is a state in which the stop is stopped down for image taking which was disclosed by *Nesson et al.* (Claim 1; Column 9, Line 52 – Column 10 Line 7). The same motivation is used as the rejection for claim 1.

As for **claim 6** refer to rejection of claim 4 where the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] as taught by *Higuma et al.* (Paragraph 0061). The same motivation is used as the rejection for claim 4.

As for **claim 7** refer to rejection of claim 6 where the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] as taught by *Higuma et al.* (Paragraph 0061). As described the image pickup element has no purpose in the first focus detection unit but

rather is part of the second focus detection unit that requires it. The same motivation is used as the rejection for claim 4.

As for **claim 9** see similar rejection to claim 4.

As for **claim 13** refer to rejection to claim 10. Everything is the same, the only difference is there is now two separate focus detection units based on different detection systems, and that one focus detection unit is used for the first state and the second focus detection unit is used for the second state after stopping down the stop. This feature is an obvious improvement to claim 1 for one of ordinary skill in the art by looking at what is disclosed in *Higuma et al.* *Higuma et al.* discloses a [so-called hybrid scheme AF] [in which the phase difference detection scheme is first used to perform focusing operation of a focus adjusting lens at low resolution and then the contrast detection scheme is used to perform fine adjustment of the focusing operation] (Paragraph 0027). It later goes to elaborate an embodiment where it is specified that these two focus detection methods are used in two separate focus detection units and that focusing is performed after the first focus detection unit detects the focus state and also after the second focus detection unit detects the focus state (Paragraph 0065). And also that the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] (Paragraph 0061). This shows a camera using two different focus detection systems and it is

obvious to one of ordinary skill in the art to use the two different focus detection units for the two different states in the invention being claimed.

Kato, Nesson et al., and *Higuma et al.* are analogous art because they are from the same field of endeavor with respect to cameras. It would have been obvious to a person of ordinary skill in the art to implement the discussed improvement to claim 10 with the motivation to reduce focusing time caused by just using the contrast scheme and to eliminate the problem of not having a high enough resolution that is required by just having a phase scheme as told by *Higuma et al.* (Paragraph 0024-0026).

As for **claim 14** refer to rejection of claim 13 where the first state is already stated to be a full aperture state and the second state is a state in which the stop is stopped down for image taking which was disclosed by *Nesson et al.* (Claim 1; Column 9, Line 52 – Column 10 Line 7). The same motivation is used as the rejection for claim 1.

As for **claim 15** refer to rejection of claim 13 where the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] as taught by *Higuma et al.* (Paragraph 0061). The same motivation is used as the rejection for claim 13.

As for **claim 16** refer to rejection of claim 15 where the first focus detection system, the phase detection system, simply uses the [luminous flux from the image-

taking optical system], and that the second focus detection system, the contrast detection system, uses the image signal from the [image pickup device which photoelectrically converts the optical image formed by the image-taking optical system to an image signal and outputs the image signal] as taught by *Higuma et al.* (Paragraph 0061). As described the image pickup element has no purpose in the first focus detection unit but rather is part of the second focus detection unit that requires it. The same motivation is used as the rejection for claim 13.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy C. Lin whose telephone number is (571) 274-3310. The examiner can normally be reached on Monday-Friday:7:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick Ferris can be reached on (571) 272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ACL/



7/25/07

DERRICK W. FERRIS
SUPERVISORY PATENT EXAMINER